



Summary

Public Health Services produces the fluTAS Report to inform healthcare organisations and the public about the level of influenza (flu) in Tasmania. Multiple data sources are used to obtain measures of flu activity in the community.

This is the final monthly report for 2015 and describes flu activity in Tasmania up to Sunday **1 November 2015**. Available data over this period indicate:

- The 2015 winter flu season has concluded.
- Flu notifications decreased during October with Influenza A and B viruses being detected in equal numbers.
- In 2015 more than three-quarters of flu notifications have been from the south of the state.
- Flu testing in Tasmanian laboratories decreased towards background levels during October.
- Influenza-like Illness (ILI) reports from Tasmanian FluTracking participants also returned to the background level in October.

Influenza Notifications

Tasmanian laboratories must notify the Director of Public Health of evidence of flu in specimens collected from patients. These specimens are usually nose or throat swabs, less often a blood sample. The best test for flu involves PCR¹ to detect influenza virus RNA present in a nose or throat swab.

Since the fluTAS Report of 6 October 2015, 108 notifications of laboratory-diagnosed flu in Tasmanian residents have been notified to the Director of Public Health. **A total of 1 398 notifications** of flu have been notified since the start of 2015. Seventy two per cent of notifications relate to residents in the south of the state (Table 1).

Influenza A virus has been responsible for slightly more than half of notifications since the start of 2015 (762 notifications or 55 per cent (Table 2)). The remaining notifications were of Influenza B virus (636 notifications or 45 per cent). This is the largest number of Influenza B notifications during a single year in Tasmania since the current surveillance system commenced in 2007.

Notifications of flu A and flu B decreased during October following peaks during late August and early September respectively. At the end of October weekly notification counts were at a level similar to past inter-seasonal periods (Figure 1). This decrease in flu notification during October indicates that the winter flu season has now passed.

Table 1: Flu Notifications by Region of Tasmania, 1 November 2015

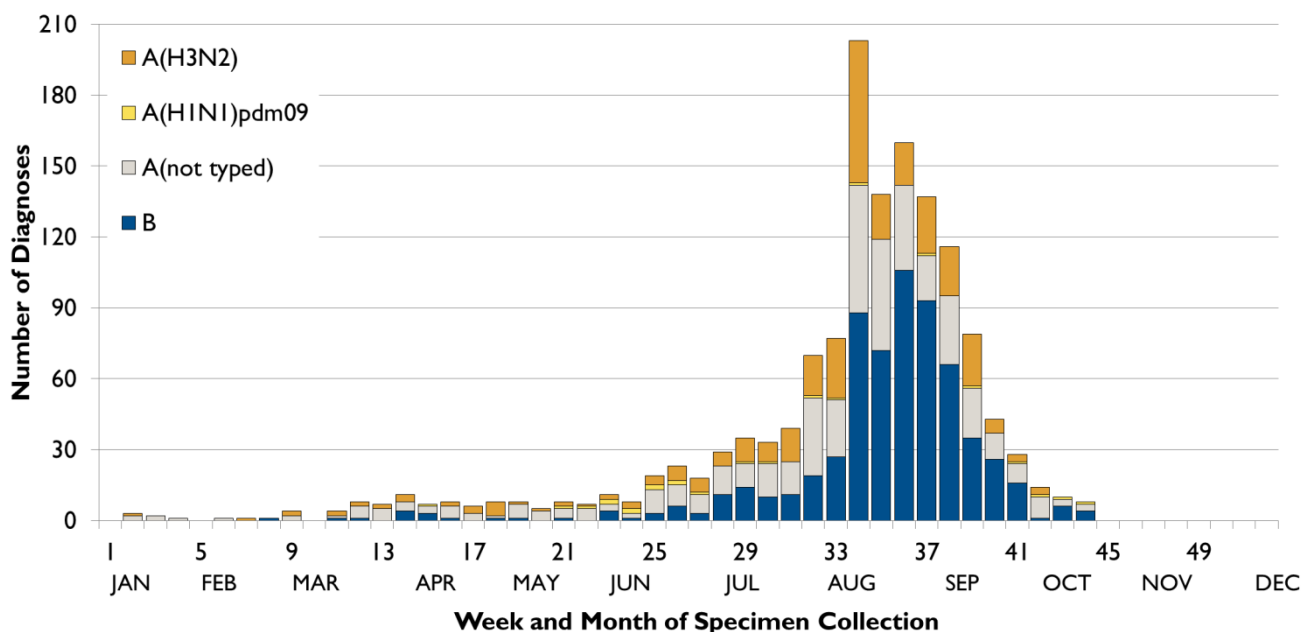
¹ Polymerase Chain Reaction

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
North	1	1	3	5	10	8	34	67	87	24	-	-	240
North-West	2	2	2	5	10	9	17	46	57	6	-	-	156
South	3	4	19	22	11	50	91	409	345	48	-	-	1 002

Table 2: Laboratory-diagnosed Influenza, Tasmania, 1 November 2015

	2007	2008	2009	2010	2011	2012	2013	2014	2015 ⁽²⁾
Influenza A	389	208	1 294	95	189	1 008	206	590	762
Influenza B	26	176	1	12	174	85	90	81	636
Total Influenza	415	384	1 295	107	363	1 093	296	671	1 398
Predominant subtype of Influenza A	unknown	unknown	H1N1	H1N1	H1N1	H3N2	H1N1	H1N1 & H3N2	H3N2

Figure 1: Laboratory-diagnosed Influenza by subtype and week of specimen collection up to 1 November 2015 (week 44)



Some flu laboratory isolates undergo further testing to identify subtypes. The flu A subtype A(H3N2)³ has been the most commonly detected during 2015 (93%) with the remainder identified as the A(H1N1) subtype⁴. Subtyping has identified 17 flu B isolates as being of B/Yamagata lineage and seven as being of B/Victoria lineage. Laboratories reported that the fully characterised flu isolates have been a good match with the strains covered by the 2015 annual influenza vaccines.

No institutional outbreaks of flu were reported during October 2015.

Circulating flu strains appear to have affected age-groups differently. Influenza A(H3N2) notification rates were highest among in older Tasmanians, whereas Influenza B notification rates were highest among children aged five to nine years.

² Current number of diagnoses up to and including 1 November 2015

³ Where the Influenza Neuraminidase ("N") typing of an A(H3) isolate is not reported this is assumed to be N2 i.e. A(H3N2).

⁴ This subtype was first associated with the 2009 swine influenza pandemic. It continues to circulate globally as a typical seasonal influenza subtype.

Laboratory Testing

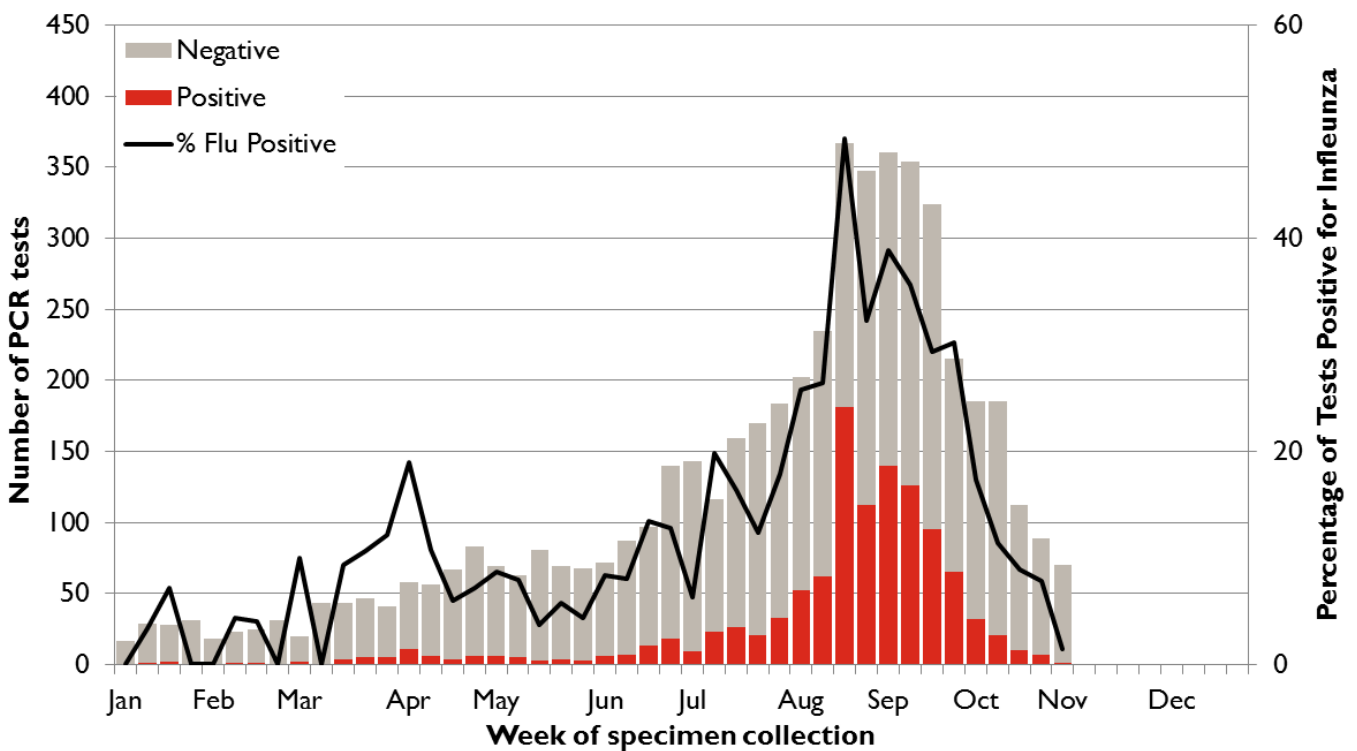
Laboratory Testing Effort

A wide range of pathogens (mostly viruses) commonly cause winter coughs, colds and influenza-like illnesses. Some people with these symptoms will visit their doctor. The decision whether to test someone for flu rests with their treating doctor, and depends on their symptoms. The best test for flu is a PCR test, which detects influenza virus RNA in a nose or throat swab. The number of these tests being performed by Tasmanian laboratories is a useful indicator of the level of respiratory illness in the community.

Since the start of 2015 most flu (92 per cent) has been diagnosed by PCR tests.

Flu testing decreased steadily during October 2015. Detections of flu similarly decreased with only one detection of flu using PCR in the final week of October (Figure 2).

Figure 2: Influenza tests via PCR by week during 2015 (at 1 November)

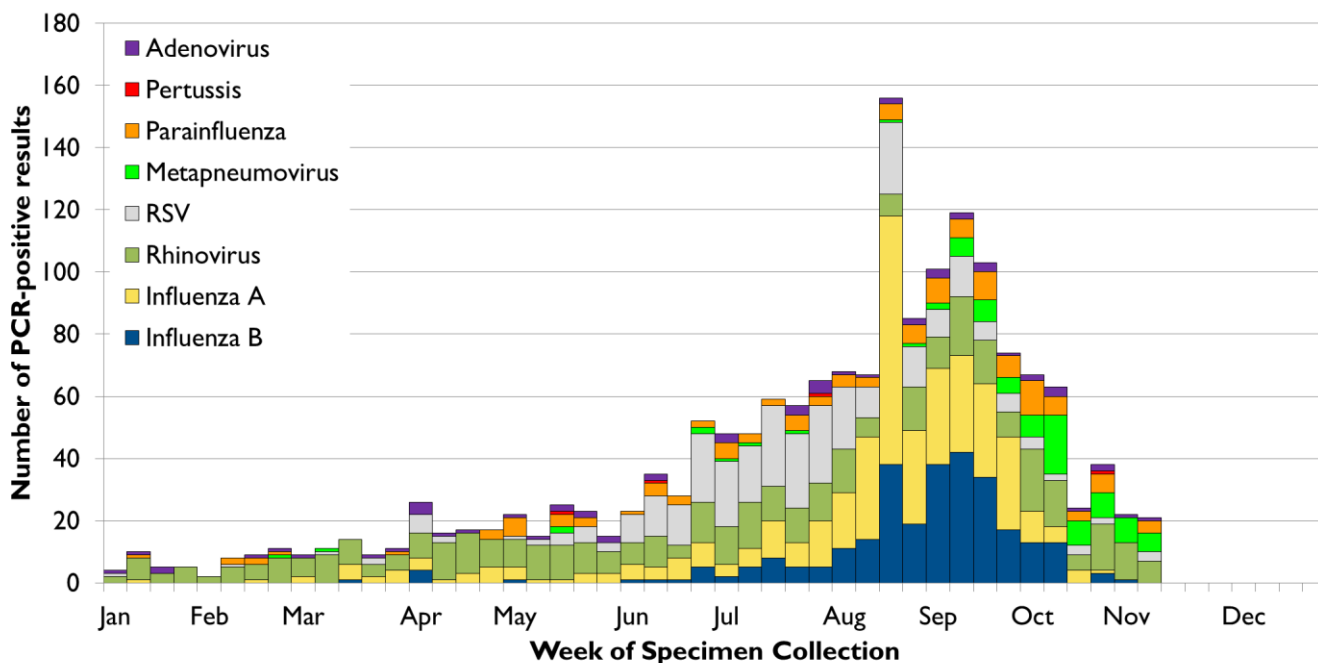


Other Respiratory Pathogens

The Royal Hobart Hospital performs PCR tests on nose and throat swabs that detect flu and multiple non-influenza respiratory pathogens that cause illness. These specimens have been collected statewide mostly from emergency department and hospitalised patients. The monitoring of non-influenza respiratory pathogen activity can help the interpretation of testing activity and syndromic surveillance trends.

Respiratory pathogen testing decreased during October (data not shown). Detections of Influenza A, Influenza B and Respiratory Syncytial Virus (RSV) decreased, while Rhinovirus and Metapneumovirus increased.

Figure 3: Respiratory pathogen detections, 2015 (at 1 November)



Influenza-like Illnesses (Syndromic Surveillance)

Influenza-like illness (ILI) is much more common than laboratory-diagnosed flu. For much of the year, common colds and other respiratory illnesses make up most of the ILI in the community. During the annual flu season, the proportion of the population experiencing symptoms of ILI who have flu usually increases. It is therefore useful to monitor the proportion of people reporting ILI, regardless of the cause.

General Practice Surveillance

ASPREN is a network of registered sentinel GPs throughout the state who report fortnightly on the number and proportion of presentations of patients with fever, cough and fatigue. ASPREN is a joint initiative of the Royal Australian College of General Practitioners and University of Adelaide. Further information is available at www.dmac.adelaide.edu.au/aspren.

The latest report (No.21) described influenza-like illness (ILI) consultations in Tasmania as being at a 'Baseline' level. During the fortnight ending 18 October 2015 the level of ILI consultation at urban practices was reported to be one out of 1 000 consultations. A peak of 47 out of 1 000 consultations being ILI-related was reported for urban practices during late July 2015. No ILI-related consultations were reported by participating rural practices during the fortnight ending 18 October 2015. The reported decline and level of ILI-related consultations by participating practices indicates the end to the winter flu season.

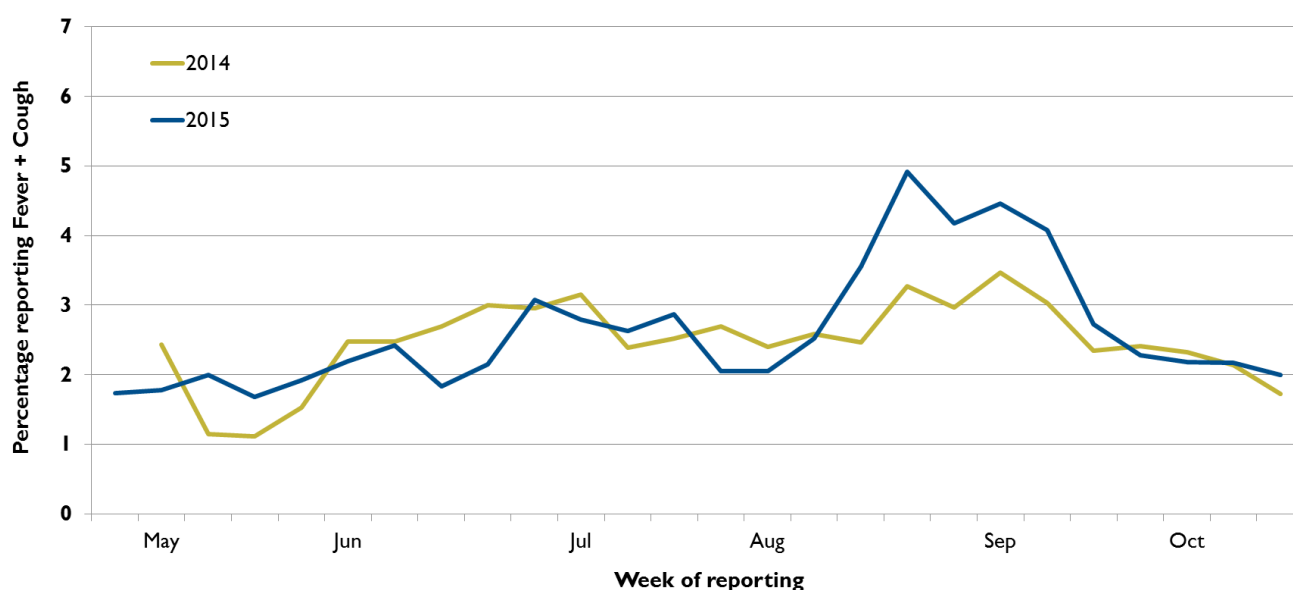
FluTracking

FluTracking is a weekly online survey that asks participants to report whether they have had fever and/or cough in the preceding week. It is a joint initiative of Newcastle University, Hunter New England Population Health and the Hunter Medical Research Institute. FluTracking information is available at www.flutracking.net.

During 2015 around 2 300 Tasmanians participated in FluTracking each week.

FluTracking concluded the 2015 survey on the week ending Sunday 18 October. Reports of ILI in Tasmanian participants declined during October (Figure 4). This decrease in reported ILI coincided with the decrease in flu notifications during October. In past years ILI reports from FluTracking participants have declined similarly with the ending of the flu season.

Figure 4: Percentage of Tasmanian FluTracking participants reporting fever and cough, 18 October 2015



Other Measures of Flu Activity

FluCAN

The Influenza Complications Alert Network (FluCAN) reports on flu-related hospitalisations and complications in sentinel hospitals in each state including Tasmania. The final weekly FluCAN report described low late-season influenza activity nationally. At 30 October 2015 total of 135 adult flu hospitalisations had been reported to FluCAN from the single participating Tasmanian hospital since 1 April 2015.

Interstate activity

The Australian Influenza Surveillance Report is compiled from a number of data sources including laboratory-confirmed notifications to NNDSS, sentinel flu-like illness reporting from general practitioners and emergency departments, workplace absenteeism and laboratory testing. The current and previous reports are available at www.health.gov.au/flureport.

The report for the fortnight ending 9 October 2015 is the final report for 2015 and provides a summary of the 2015 influenza season. Recent flu activity was described as continuing to decline following the seasonal peak in mid-August.

Annual Flu Vaccine

The contents of the annual flu vaccine are reviewed late each year, aiming to produce vaccines for the following year that provide protection from flu strains likely to be common during winter. Advice on the formulation of annual flu vaccines is provided by the Australian Influenza Vaccine Committee:

www.tga.gov.au/committee/australian-influenza-vaccine-committee-aivc.

The formulation of the 2015 vaccine is described at www.tga.gov.au/aivc-recommendations-composition-influenza-vaccine-australia-2015.

The Australian Influenza Vaccine Committee (AIVC) met on 8 October 2015 to provide the Therapeutic Goods Administration (TGA) with a recommended composition of influenza vaccines in 2016. In particular it was recommended that the TGA adopt the September 2015 WHO recommendations. The TGA has subsequently accepted the AIVC recommendations. The formulation of a 2016 vaccine is described at www.tga.gov.au/aivc-recommendations-composition-influenza-vaccine-australia-2016. The Australian Government has announced that quadrivalent (four strain) formulations of influenza vaccine will be funded to protect vulnerable Australians through the National Immunisation Program in 2016. These vaccines will include two strains of Influenza A and, for the first time, two strains of Influenza B.

Annual vaccination is recommended in the National Immunisation Program and is free* for Tasmanians at risk of severe flu, including:

- anyone aged 65 and over
- Indigenous children aged six months to five years
- Indigenous people aged 15 years or over
- pregnant women
- any person six months of age and over with a chronic condition predisposing to severe flu illness that needs regular medical follow-up or hospitalisation such as: cardiac disease, respiratory disease including severe asthmatics, kidney disease, diabetes, impaired immunity, neuromuscular disease.

* The cost of the vaccine is covered for these groups; there may be a consultation fee for the medical provider to administer the vaccine.



The **fluTAS Report** is a fortnightly flu season update produced by the DHHS Public Health Services to inform healthcare organisations and the public about flu activity in Tasmania.

Alongside routine surveillance of diseases in Tasmania, the report combines multiple data sources to obtain a measure of flu activity in the community, which can be used by our health system to prepare and respond.

To provide feedback on the fluTAS Report email Communicable Disease Prevention Unit or call the Public Health Hotline – Tasmania on 1800 671 738.